CLAIMS

1. An isolated nucleic acid selected from the group consisting of:
   a) SEQ ID NO:2, SEQ ID NO:4, SEQ ID NO:6 SEQ ID NO: 8, or SEQ ID NO:10;
   b) a nucleic acid sequence encoding amino acid SEQ ID NO:3, SEQ ID NO:5, SEQ ID NO:7, SEQ ID NO: 9 or SEQ ID NO: 11;
   c) a complementary nucleic acid sequence of SEQ ID NO:2, SEQ ID NO:4, SEQ ID NO:6, SEQ ID NO: 8, or SEQ ID NO:10; and
   d) a nucleic acid sequence comprising at least 50 nucleotides which hybridizes under stringent conditions to SEQ ID NO:2, SEQ ID NO:4, SEQ ID NO:6, SEQ ID NO: 8, or SEQ ID NO:10..

2. The isolated nucleic acid of Claim 1 which is DNA.

3. The isolated nucleic acid of Claim 1 which is RNA.

4. An expression vector containing the nucleic acid of Claim 1.

5. A host cell containing the vector of Claim 4.

6. The host cell of Claim 5 which is a eukaryotic cell.

7. The host cell of Claim 6 which is a human cell.

8. The host cell of Claim 5 which is a prokaryotic cell.

9. Isolated DNA or RNA comprising at least 50 consecutive nucleotides of:

a) SEQ ID NO:2, SEQ ID NO:4, SEQ ID NO:6, SEQ ID NO:8, or SEQ ID NO:10; or

b) a complementary nucleic acid sequence of: SEQ ID NO:2, SEQ ID NO:4, SEQ ID NO:6, SEQ ID NO:8, or SEQ ID NO:10.

10. An isolated nucleic acid which hybridizes to the DNA or RNA of Claim 9 under high stringency conditions.

11. An expression vector containing the DNA or RNA of Claim 9.

12. A host cell containing the vector of Claim 11.

13. The host cell of Claim 5 which is a eukaryotic cell.

14. The host cell of Claim 6 which is a human cell.

15. The host cell of Claim 5 which is a prokaryotic cell.

16. An isolated amino acid sequence comprising SEQ ID NO:3, SEQ ID NO:5, SEQ ID NO:7, SEQ ID NO:9 or SEQ ID NO: 11.

17. An isolated amino acid sequence encoded by 50 or more consecutive nucleotides of SEQ ID NO:2, SEQ ID NO:4, SEQ ID NO:6, SEQ ID NO:8, or SEQ ID NO:10.

18. An isolated polypeptide having 80% or greater sequence identity to the amino acid sequence according to Claim 16.

19. An amino acid sequence comprising at least 20 or more consecutive residues of a sequence according to Claim 16.

20. A polynucleotide comprising at least 15 consecutive nucleotides of any of the nucleic acids of Table 5, wherein the 15 consecutive nucleotides include a single nucleotide polymorphic site selected from Table 5.

21. An isolated variant of SEQ ID NO:2, SEQ ID NO:4, SEQ ID NO:6, SEQ ID NO: 8, or SEQ ID NO:10, wherein the variation contains one or more SNPs from Table 5.

22. A polypeptide encoded by a nucleic acid sequence according to Claim 21.

23. An antibody or antibody fragment which binds to an amino acid sequence of Claim 16.

24. An antibody or antibody fragment which binds to an amino acid sequence of Claim 17.

25. An antibody or antibody fragment which binds to a polypeptide of Claim 18.

26. An antibody or antibody fragment which binds to an amino acid sequence of Claim 19.

27. An isolated nucleic acid fragment comprising at least 15 consecutive nucleotide bases of BAC RP11-0702C13 of SEQ ID NO:1.

28. A method of identifying and obtaining a human chromosome 12q23-qter gene or a homolog in a mammal, comprising the steps of:

a) preparing a sample of cells or tissue of the mammal;

b) probing the tissue or cell with all or a portion of a human chromosome 12q23-qter nucleic acid under conditions wherein hybridized DNA can be produced;

c) identifying the hybridized DNA; and

d) cloning and sequencing the hybridized DNA to obtain and identify the human chromosome 12q23-qter gene or homolog in the mammal,

wherein, the human chromosome 12q23-qter gene or homolog is obtained.

29. A method of treating a chromosome 12 disorder comprising administering a molecule which binds an endogenous analog of Gene 214.

30. A method of treating a chromosome 12 disorder comprising administering a compound which is an agonist or an antagonist of a polynucleotide selected from the group consisting of: SEQ ID NO:2, SEQ ID NO:4, SEQ ID NO:6, SEQ ID NO:8, or SEQ ID NO:10, a variant and fragment thereof.

31. The method of Claim 29 wherein the antagonist is an antibody or an antibody fragment.

32. A kit for detecting chromosome 12 disorder in a biological sample comprising a probe containing a nucleic acid sequence of Claim 1 and hybridization reagents.

33. A method of diagnosing an individual with a chromosome 12 disorder comprising:

a) contacting a sample suspected to contain a disease-associated antigenic component with an antibody of Claim 23, and

b) detecting antibody-antigen complexes.